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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dong Jae You

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09/20/2006

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EXAMINER

SCHECHTER, ANDREW M

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/701,822	YOU ET AL.	
	Examiner	Art Unit	
	Andrew Schechter	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 7-10, 14-21, 29, 30, 34-42 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11, 12, 22-28, 31-33, 43, 44, 46 and 47 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Response to Arguments

2. Applicant's arguments filed 28 June 2006 have been fully considered but they are not persuasive.

The applicant argues [p. 10] that *Mashino* does not have an "optical sheet ... having a hardened part" as recited in claim 1. This is not persuasive. The scope of the term "hardened", given the broadest reasonable interpretation in light of the specification, includes the structure of *Mashino* in which a part of the optical sheet is reinforced by having additional layers adhered to it, thus becoming harder, less easily penetrated, and less easily yielding to pressure. The applicant argues that the optical sheet "is not modified... and thus does not have a hardened part". This is not persuasive. The claim does not require the material of the optical sheet itself to be modified, just that the optical sheet has a hardened part; clearly *Mashino* discloses an optical sheet, one part of which has been hardened by the addition of the extra layers.

The applicant argues [p. 10], regarding claim 11, that the hardened part does not comprise a projecting part, pointing out that none of the components of the part

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“projects further in the horizontal plane than any of the others”. This is irrelevant, as the projection is in the vertical direction.

The applicant argues [p. 11] that *Jang* has a common assignee and inventor with the present application, so it is not prior art under 35 USC 102(e) in accordance with 35 USC 103(c), so “an anticipation rejection based on *Jang* cannot be made”. This is not persuasive. As pointed out by the examiner, *Jang* is indeed prior art under 35 USC 102(e), and an anticipation rejection based on *Jang* is entirely appropriate, although it may be overcome in the ways described by the examiner. (As a commonly assigned 102(e) reference, *Jang* would be disqualified as a reference for a 103 rejection, were it established that they were commonly assigned at the time of the claimed invention; since *Jang* is not relied on in any 103 rejections at present, this is not an issue.)

The previous rejections are therefore maintained. The examiner’s discussion of the limitations deleted from the claims by the applicant’s amendment has been retained for future reference, though it is no longer strictly necessary.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 11, 12, 22, 23, 25-27, 43, 44, 46, and 47 are rejected under 35

U.S.C. 102(b) as being anticipated by *Mashino et al.*, U.S. Patent No. 5,886,759.

Mashino discloses [see Figs. 1 and 5, for instance] a display comprising a light source [36], a display panel [62] having a display region, and at least one optical sheet [39] through which light from the light source passes and having region most proximate to the light source with a hardened part [the sandwich on the left in Fig. 5, from the light guide 37 to the reflector sheet 70 and everything in-between] that substantially prevents heat from the light source from being transferred to a display region of the at least one optical sheet corresponding to the display region of the display panel [apart from shielding light, the sandwich also acts as a heat sink to the light guide and the reflector sheet, thereby keeping the optical sheet to its right relatively cool, compared to if the hardened part was absent, thus substantially preventing heat from being transferred]. Claim 1 is therefore anticipated.

Mashino also discloses the analogous method of manufacturing this display, so claim 23 is also anticipated.

There is a light guide panel [37] and the optical sheet is a diffusion sheet, so claims 2 and 25 are also anticipated. The optical sheet comprises a non-display region in which the hardened part is formed, so claim 3 is also anticipated. As seen in Fig. 1A, there is a non-display region of the display panel, and the hardened part overlaps it and overlaps only it, so claims 4, 5, 26, 27, 43, and 44 are also anticipated. The hardened part comprises a projecting part [79], so claim 11 is also anticipated. The projecting part

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projects towards the display panel, so claim 12 is also anticipated. A temperature difference across the display region of the optical sheet is minimized (reduced), so claims 22 and 46 are also anticipated. The hardened part is aligned in a direction of warping generated by the heat from the light source [parallel the edge of the light source, as discussed under 35 USC 112], so claim 47 is also anticipated.

5. Claims 1, 2, 11, 12, 22-25, 31-33, 46, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by *Jang et al.*, U.S. Patent No. 6,891,580.

[The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.]

Jang discloses [see Fig. 4, for instance] a display comprising a light source [220], a display panel [10], an optical sheet [260, 270, 280] through which light from the light source passes and having a region most proximate to the light source with a hardened part [see below] that substantially prevents heat from the light source from being transferred [see below] to a display region of the optical sheet corresponding to the display region of the display panel.

Jang does not explicitly refer to the bent portion shown in Fig. 4 as a “hardened part”. However, it is bent which requires stress in the sheet, and according to the

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present specification [see paragraph 0072 of the specification, for instance], the stress involved in bending the sheets inherently causes part of it to be hardened [the amount of hardening will vary, presumably related to the amount of stress in bending]. Thus, the bent portion being, to at least a certain extent, a “hardened part” is inherent.

Similarly, the bent portion / hardened part increases the thermal resistance [again an inherent feature discussed in the present specification], so it is inherent that *Jang*’s device satisfies the limitation that it substantially prevents [at least some] heat from being transferred. [The examiner notes that an argument that these features are not inherent in *Jang* but depend on, for instance, the specific bending process, would raise the issue of whether the present specification enables the claimed invention to be made and used by one of ordinary skill under 35 USC 112, first paragraph.] Claim 1 is therefore anticipated.

Jang also discloses the analogous method of manufacturing this display, so claim 23 is also anticipated.

There is a light guide panel [240] and the optical sheet comprises a diffusion sheet [260], so claims 2 and 25 are also anticipated. The hardened part comprises a projecting part, so claim 11 is also anticipated. The projecting part projects towards the display panel, so claim 12 is also anticipated. A temperature difference across the display region of the optical sheet is minimized (reduced), so claims 22 and 46 are also anticipated. The method comprises forming the hardened part in the optical sheet, so claim 24 is also anticipated. The optical sheet contained the hardened part having a projecting portion that projects towards the display panel, so claim 31 is also

anticipated. The method comprises forming the projecting portion in the optical sheet, so claim 32 is also anticipated. The projecting portion comprises a convex part [the hardened part is at the bend, and the bend is convex when viewed from above], so claim 33 is also anticipated. The hardened part is aligned in a direction of warping generated by the heat from the light source [parallel the edge of the light source, as discussed under 35 USC 112], so claim 47 is also anticipated.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mashino et al.*, U.S. Patent No. 5,886,759 in view of *Jeong et al.*, U.S. Patent No. 6,595,651.

Mashino does not disclose the additional limitation that the hardened part is formed on opposing sides of the optical sheet. *Mashino* discloses a single lamp and a single hardened part. Having a single lamp and having two opposing lamps are art-recognized equivalents, as evidenced by *Jeong* [compare Figs. 6 and 11, for instance]. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the device of *Mashino* with two opposing lamps [as shown in *Jeong*'s Fig. 11], motivated by the art-recognized equivalence of doing so. The device would then have

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two hardened portions, one adjacent to each lamp [*Mashino* teaches the hardened portions are principally used to prevent light leakage, so each lamp would have one], formed on opposing sides, so claims 6 and 28 are therefore unpatentable.

Allowable Subject Matter

8. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose the device of claim 13, in particular the additional limitation that height of the projecting part is about 0.15 mm to about 0.2 mm. Claim 13 would therefore be allowable if rewritten appropriately.

Election/Restrictions

10. Claims 7-10, 14-21, 29, 30, 34-42, and 45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 3 January 2006.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached at (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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17 September 2006